

- C<sup>3</sup>  
could
- A. at said first HLR node, changing a state of said subscriber data from active to standby;
  - B. copying from said first HLR node said subscriber data associated with said subscriber identity or said small group of subscriber identities to said second HLR node; and
  - C. at said second HLR node, changing the state of said subscriber data from standby to active,

wherein active data of the first HLR node which is not to be migrated or is to be migrated but has not yet been migrated is maintained as active while said subscriber data currently being migrated is processed according to steps A to C.

---

#### Remarks

The Examiner's reconsideration of the application is requested in view of the further amendments above (with the marked-up versions being in the attachments hereto) and comments which follow.

The Examiner has rejected claims 1, 2, 3, 5, 13 and 14 under 35 U.S.C. §102(b) as being anticipated by Houde et al, although in Section 6 of the Office Action the Examiner alludes to the fact that there is a limitation which could be introduced into the independent claims which would distinguish the present invention over Houde et al.

The claims have now been amended as appropriate to refer to the fact that, when a subscriber data is being migrated from the first home location register (HLR) node to a second HLR node, active data of said first node that is not to be migrated, or is to be migrated but has not yet been migrated, is maintained as active while said subscriber data that is currently being

migrated is in the process of being migrated. This clearly distinguishes the present invention over Houde et al which requires that a (master) HLR node to which subscriber data is being migrated from another HLR node after recovery from failure of the HLR node requires that the HLR node is as a whole placed in a standby mode, i.e., a non-operational mode. In the present invention, it is only the small amount of subscriber data that is in the process of being migrated that is effectively non-operational with all other active subscriber data being maintained as active and available for operation of the communication system. The applicants' detailed explanation of the various methods defined by the independent claims of the present application, together with the discussion of the relevance of Houde et al as set out in the amendment accompanying the continued prosecution application dated 10 December 2001 remain entirely pertinent in this regard. It is the applicants' contention that the amendments now made to the independent claims clearly and unambiguously distinguish the present invention from that of Houde et al such that the Examiner cannot maintain any rejection of these claims on the ground that they are either anticipated or rendered obvious by Houde et al.

The Examiner has also rejected claims 1 to 3, 5, 7 to 10, 13 and 14 under 35 U.S.C. §102(e) as being anticipated by Ericsson et al. Reconsideration is requested.

The Examiner appears to have misunderstood the teaching of Ericsson or what it purports to disclose. For example, in Section 2 of the Office Action, the Examiner states "*Note that Ericsson teaches diverting transactions from one HLR to the other HLR where the subscriber is active (Ericsson, see especially column 4, lines 28-47). Therefore, the first HLR would be in standby, while the second is active.*". It is submitted by the applicants that this section of Ericsson et al teaches no such thing. What this section of Ericsson et al, and particularly lines 39/40, disclose is that, dependent on the subscriber's behavior, the

subscriber's HLR data will be transferred from the current HLR to the HLR of the subscriber's most visited area. All this does is merely confirm the purpose of the invention as disclosed in Ericsson et al that, where a subscriber is found to have changed location based on observed behavior, a decision will be taken to transfer his HLR to the HLR of the zone which he appears to be most frequently visiting within the system. There is no mention in this section of Ericsson et al as to the establishment of the diversion of transactions from one HLR to another.

It is submitted that there are other flaws in the manner in which the Examiner has arrived at his rejection of the abovementioned claims. In particular, it is clear from the present invention that subscriber data is shared among HLRs in such a manner that some active subscriber data in one HLR is mirrored by identical data in another HLR which is placed in a standby mode rather than an active mode. This is an important aspect of the present invention, at least in one of the methods proposed for sharing load between HLRs and for recovering from failure of an HLR. There is nothing in the teaching of Ericsson which addresses this mirroring of active and standby data between the HLRs when, in the case of Ericsson, it is decided that a subscriber's behavior is such that his subscriber data should be transferred to the HLR of his most visited zone. There is no specific teaching in Ericsson that once the subscriber's data is transferred from his initial HLR to that of his most visited zone that the subscriber's data in the original HLR is maintained in a disabled or standby form. Ericsson remains silent on this point and it can only be implied that this is the case. It is equally likely that the data would be deleted since there is no purpose for maintaining said data in a standby mode given that Ericsson is not teaching a system in which the active data in one HLR node is mirrored as standby data in another in order to assist recovery from failure of a node, for example. However, in order to more subtly distinguish the present invention,

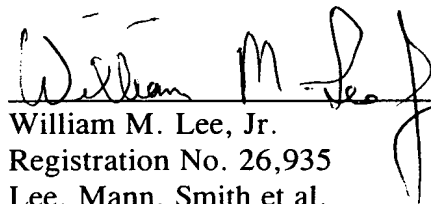
independent claims 1 and 11 have each been amended to indicate that each HLR node supports some subscriber data as active data and some subscriber data as standby data, wherein said standby data of each node corresponds to some active subscriber data of the other node.

It is the applicants' view that with respect to Ericsson the Examiner has taken some poetic license as to the relevance of this prior art reference to the present invention insofar as his rejection of certain of the claims based on this reference comprises broad allusions to what it teaches but no specific indication of where the elements of the present invention as defined by the various independent claims can be found. A serious analysis of Ericsson shows that, in fact, all of the elements of the present invention cannot be discovered in Ericsson in a manner which justifies the Section 102 rejection of the claims. It is also the case that the content of Ericsson does not provide a sound basis for suggesting that, in the absence of anticipation of the present invention, Ericsson somehow renders the invention as claimed obvious.

Given the above, it is submitted that the application, as amended, distinguishes from the references, whether considered alone or in any combination. The application is therefore believed to be in condition for allowance, and the Examiner's further and favorable reconsideration in that regard is urged.

Respectfully submitted,

Date: May 31, 2002

A handwritten signature in dark ink, appearing to read "William M. Lee, Jr.", is written over a horizontal line.

William M. Lee, Jr.  
Registration No. 26,935  
Lee, Mann, Smith et al.  
PO Box 2786  
Chicago IL 60690-2786  
(312) 368-1300 Telephone  
(312) 368-0034 Facsimile

**Version With Markings To Show Changes Made**

1. (Thrice amended) A method of migrating subscriber data associated with a plurality of subscriber identities from a first Home Location Register (HLR) node to a second HLR node, said HLR nodes being arranged such that subscriber data is distributed between said nodes, each node supporting some subscriber data as active data and some subscriber data as standby data, said standby data of [one]each node corresponding to some active subscriber data of the other node, said nodes being connected by a fixed network, wherein, for each subscriber data associated with a subscriber identity or a small group of subscriber identities to be migrated from said first HLR node to said second HLR node, the method comprises the steps of:
  - A. at said first HLR node, changing a state of said subscriber data from active to standby; and
  - B. transferring said subscriber data from said first HLR node to said second HLR node by way of changing at said second HLR node the state of the subscriber data from standby to active,  
  
wherein active data of the first HLR node which is not to be migrated or is to be migrated but has not yet been migrated is maintained as active while said subscriber data currently being migrated is processed according to steps A and B.
11. (Twice amended) A computer program stored on a machine readable medium which is arranged to implement a method of migrating subscriber data associated with a plurality of subscriber identities from a first Home Location Register (HLR) node to a second HLR node, said HLR nodes being arranged such that subscriber data is

distributed between said nodes, each node supporting some subscriber data as active data and some subscriber data as standby data, said standby data of [one]each node corresponding to some active subscriber data of the other node, said nodes being connected by a fixed network, wherein, for each subscriber data associated with a subscriber identity or a small group of subscriber identities to be migrated from said first HLR node to said second HLR node, the method comprises the steps of:

- A. at said first HLR node, changing a state of said subscriber data from active to standby; and
- B. transferring said subscriber data from said first HLR node to said second HLR node by way of changing at said second HLR node the state of the subscriber data from standby to active,

wherein active data of the first HLR node which is not to be migrated or is to be migrated but has not yet been migrated is maintained as active while said subscriber data currently being migrated is processed according to steps A and B.

13. (Amended) A method of migrating subscriber data associated with a plurality of subscriber identifies from a first Home Location Register (HLR) node to a second HLR node, said HLR nodes being connected by a fixed network, the method comprising the steps of:

copying the subscriber data associated with said plurality of subscriber identities from said first HLR node to said second HLR node;

and, for each subscriber data associated with a subscriber identity or a small group of subscriber identities to be migrated from said first HLR node to said second HLR node, the method comprises the further steps of:

- A. at said first HLR node, changing a state of said subscriber data from active to standby; and
- B. transferring said subscriber data from said first HLR node to said second HLR node by way of changing at said second HLR node the state of the subscriber data from standby to active,

wherein active data of the first HLR node which is not to be migrated or is to be migrated but has not yet been migrated is maintained as active while said subscriber data currently being migrated is processed according to steps A and B.

14. (Amended) A method of migrating subscriber data associated with a plurality of subscriber identities from a first Home Location Register (HLR) node to a second HLR node, said HLR nodes being connected by a fixed network, for each subscriber data associated with a subscriber identity or a small group of subscriber identities to be migrated from said first HLR node to said second HLR node, the method comprises the steps of:

- A. at said first HLR node, changing a state of said subscriber data from active to standby;
- B. copying from said first HLR node said subscriber data associated with said subscriber identity or said small group of subscriber identities to said second HLR node; and

C. at said second HLR node, changing the state of said subscriber data from standby to active,

wherein active data of the first HLR node which is not to be migrated or is to be migrated but has not yet been migrated is maintained as active while said subscriber data currently being migrated is processed according to steps A to C.

15. (Amended) A computer program stored on a machine readable medium which is arranged to implement a method of migrating subscriber data associated with a plurality of subscriber identifies from a first Home Location Register (HLR) node to a second HLR node, said HLR nodes being connected by a fixed network, the method comprising the steps of:

copying the subscriber data associated with said plurality of subscriber identities from said first HLR node to said second HLR node;

and, for each subscriber data associated with a subscriber identity or a small group of subscriber identities to be migrated from said first HLR node to said second HLR node, the method comprises the further steps of:

A. at said first HLR node, changing a state of said subscriber data from active to standby; and

B. transferring said subscriber data from said first HLR node to said second HLR node by way of changing at said second HLR node the state of the subscriber data from standby to active,

wherein active data of the first HLR node which is not to be migrated or is to be migrated but has not yet been migrated is maintained as active while said subscriber data currently being migrated is processed according to steps A and B.

16. (Amended) A computer program stored on a machine readable medium which is arranged to implement a method of migrating subscriber data associated with a plurality of subscriber identities from a first Home Location Register (HLR) node to a second HLR node, said HLR nodes being connected by a fixed network, for each subscriber data associated with a subscriber identity or a small group of subscriber identities to be migrated from said first HLR node to said second HLR node, the method comprises the steps of:

- A. at said first HLR node, changing a state of said subscriber data from active to standby;
- B. copying from said first HLR node said subscriber data associated with said subscriber identity or said small group of subscriber identities to said second HLR node; and
- C. at said second HLR node, changing the state of said subscriber data from standby to active,

wherein active data of the first HLR node which is not to be migrated or is to be migrated but has not yet been migrated is maintained as active while said subscriber data currently being migrated is processed according to steps A to C.